

What is claimed is:

1. A headlight for motor vehicles, comprising:
 - an optical element;
 - a support element; and
 - at least one ball-and-socket joint that connects the optical element to the support element and has a spherical ball and a spherical socket,
 - wherein the socket encloses the ball with socket segments and is inserted into a receptacle together with the ball and contacts the inside of the receptacle with its socket segments,
 - wherein the socket has a base that contacts the bottom of the receptacle and on its other side has freestanding elastic socket segments that enclose the ball, and
 - wherein elastic detent elements of the receptacle engage the base of the socket and retain the socket axially in the receptacle.
2. The headlight according to claim 1, wherein the elastic detent elements are comprised of detent tabs, which are each molded on an edge of an opening in the circumferential side wall of the receptacle and point with their free end section to the bottom of the receptacle and radially inward.
3. The headlight according to claim 1, wherein the elastic detent elements contact a circumferential edge section of the base that is freestanding in the radially outward direction and hold the base against the bottom of the receptacle.
4. The headlight according to claim 2, wherein the opening for the detent elements extends from the circumferential side wall of the receptacle toward the central region of the bottom.
5. The headlight according to claim 1, wherein a central region of the bottom of the receptacle has, on the side facing the base, a raised area that serves as a stop for the base.

6. The headlight according to claim 2, wherein the socket on the inside of the receptacle elastically contacts the inside of the receptacle between the openings for the elastic detent elements and the free edge of the receptacle and holds the ball in its desired position by the freestanding radially elastic socket segments.

7. The headlight according to claim 6, wherein the elastic socket segments have, on their edge section pointing opposite the direction of insertion, at least one projection with which they contact the inside of the receptacle.

8. The headlight according to claim 7, wherein the elastic socket segments have, on each of the neighboring sides of their free edge sections, one projection.

9. The headlight according to claim 1, wherein the base of the socket is a circular disk whose outer edge section has a radius on the circumferential edge facing the bottom of the receptacle.

10. The headlight according to claim 1, wherein the base of the socket is a circular disk whose outer edge section has a circumferential contact chamfer for the elastic detent elements on the edge facing away from the bottom of the receptacle.

11. A headlight for a motor vehicle, the headlight comprising:

- a support element having an adjusting device and a guide element being fixedly attached to the support element, the guide element having a ball;

- a socket for receiving the ball of the guide element, the socket having flexible socket segments extending from a base portion of the socket such that the flexible socket segments encompass a portion of the ball of the guide element so that the ball is rotatably secured within the socket, the base portion of the socket includes a chamfer contact area that extends circumferentially about the base portion of the socket;

- a receptacle being fixedly secured to an optical element, the receptacle having a receiving aperture formed therein for receiving the socket, the receptacle

further including bendable detent tabs that extend into the receiving aperture and fixedly secure the socket within the receiving aperture by engaging an end portion of the detent tabs with the chamfer contact area of the base portion of the socket.

12. The headlight according to claim 11, wherein, when the adjustment device is operated, a position of the optical element changes and the receptacle and socket is adapted to rotate about the ball of the guide element.

13. The headlight according to claim 11, wherein the receiving aperture of the receptacle is adapted to encompass the socket therein.

14. The headlight according to claim 11, wherein the receiving aperture has a base wall, which forms a portion of a housing of the receptacle, the base wall being adapted to contact the base portion of the socket.

15. The headlight according to claim 11, wherein the receiving aperture of the receptacle is formed to be substantially cylindrical.